



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,483	09/26/2003	Ulrich Bonne	H0006099(1100.1239101)	8252
128	7590	12/07/2005	EXAMINER	
HONEYWELL INTERNATIONAL INC.			FITZGERALD, JOHN P	
101 COLUMBIA ROAD			ART UNIT	
P O BOX 2245			PAPER NUMBER	
MORRISTOWN, NJ 07962-2245			2856	

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/672,483

Applicant(s)

BONNE, ULRICH

Examiner

John P. Fitzgerald

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/28/04, 4/30/04
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I, species Figure 17 and subspecies 4 and 6B (claims 1-9) in the reply filed on 20 September 2005 is acknowledged.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 6-9 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 recites in part "a first pump connected to a first pump." It is unclear how a first pump can be connected to itself or the presence of two "first pumps." For the purposes of examination, it will be assumed that only a single "first pump" is being claimed connected to the pre-concentrator.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

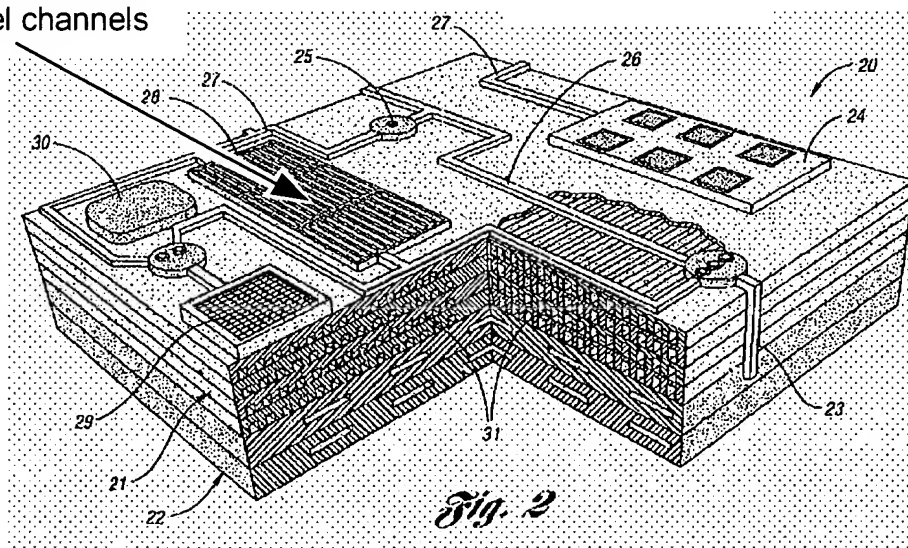
5. Claims 1-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US 6,838,640 to Wise et al., US 5,300,758 to Roundbeler et al. and US 5,196,039 to Philips et al.

Art Unit: 2856

Wise et al. disclose a fluid analyzer (see Fig. 2 below) including a pump (22) a pre-concentrator (28) having a plurality of parallel channels, a multi-zone separator (31) (Fig. 4) (i.e. first and second separators, as recited in claim 3) connected to the pre-concentrator, the separator also with a plurality of parallel channels and detectors (pressure sensors and temperature sensors) as well as a plurality of individually-controllable (i.e. a controller connected, as recited in claim 5) heaters distributed along a length of the plurality of parallel channels of the separator in each zone. Wise et al. do not specifically disclose a concentrator connected to the pre-concentrator (i.e. plural concentrators) (as recited in claim 1), a plurality of heater elements within the concentrator or a second plurality of heater elements with the channels of the pre-concentrator (as recited in claim 2 and 4), first and second pumps connected to the pre-concentrator and separator.

pre-concentrator  
with a plurality of  
parallel channels

**Wise et al.**



Art Unit: 2856

Roundbehler et al. disclose a fluid analyzer having many of the recited elements of instant claim 1 including but not limited to: a pump (54) and two separators (60 and 64) as well as first and second concentrators (38, 40) connected to one another (see Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ more than one concentrator connected to one another, as taught by Roundbehler et al., modifying the fluid analyzer disclosed by Wise et al., thus providing means to permit rapid concentration of vapors (Roundbehler et al.: col. 2, lines 28-31). Phillips et al. disclose a fluid analyzer (Figs. 1-4e) having many of the recited elements including a concentrator having a heater that comprises a "thin electrically conductive film" or "conductive wall tube/channel," wherein the resistance (i.e. heating) may be varied by varying the thickness of the electrically conductive film, and a "thermal gradient in time" can be created by varying the electric current through the electrically conductive film as a function of time (i.e. thermal/electrical pulses) (Phillips et al.: col. 12, lines 51-58, claim 20), and thus capable of creating "moving temperature/heat/gradient zones" wherein the rate of movement is approximately the same as the fluid moving through the channel (as recited in claim 9) (Phillips et al.: col. 19, lines 25-30 and col. 20, lines 19-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a heater as taught by Phillips et al., modifying the individual heating elements disclosed by Wise et al. and employing them within the channels of the pre-concentrator of the fluid analyzer disclosed by both Wise et al. and Roundbehler et al., thus providing a fluid analyzer to provide "thermal modulation to accumulate and focus, refocus and then accelerate a concentration pulse in the carrier stream" without the loss of orthogonality (Phillips et al.: col. 4, lines 55-69). In specific regards to claims 6-8, the employment of multiple pumps and detectors at any desired

Art Unit: 2856

location (i.e. connected to any portion/element) of a fluid analyzer would be considered well within the skill set of one of ordinary skill in the art to provide the necessary pressure gradient and movement of fluid through the fluid analyzer at a chosen/desired rate, and also providing monitoring of the fluid's physical state (i.e. pressure, temperature) within the various stages/elements of the analyzer to monitor/detect the fluid moving through the analyzer.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is invited to review the Prior Art cited by the Examiner on PTO form 892 accompanying this office action citing Prior Art relevant to the instant invention.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fitzgerald whose telephone number is (571) 272-2843. The examiner can normally be reached on Monday-Friday from 7:00 AM to 3:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams, can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

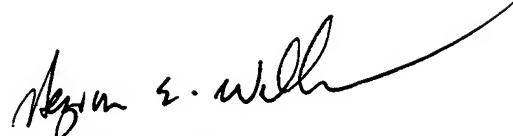
Art Unit: 2856

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'JF'.

JF

11/25/2005

A handwritten signature in black ink, appearing to be 'Hezron Williams'.

HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800